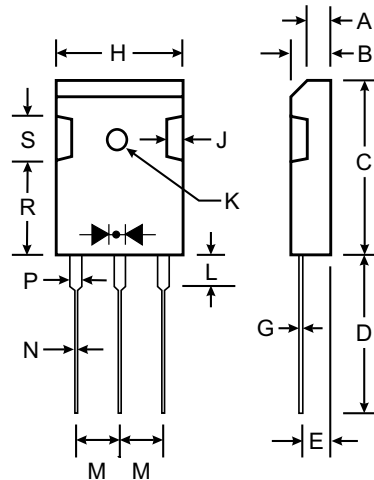


Features

- Plastic Package - UL Flamability Classification 94V-0
- High Current Capability
- High Surge Capacity
- High Fast Switching Capability < 35 ns
- Low Switching Noise and High Reliability

Mechanical Data

- Case: TO-3P Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Mounting Position: Any
- Polarity: As marked
- Approx. Weight: 5.6 gram



Common Cathode (no Suffix) shown
Add Suffix 'A' for Common Anode
& change '+' to '-' in illustration above

TO-3P		
Dim	Min	Max
A	3.2	3.5
B	4.5	5.4
C	21.6	22.5
D	18.9	21.7
E	2.4	2.8
G	0.55	0.81
H	15.8	16.2
J	1.7	2.7
K	3.1 \emptyset	3.3 \emptyset
L	4.2	4.5
M	5.1	5.7
N	0.89	1.5
P	2.9	3.3
R	11.7	12.8
S	5.0	6.0

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current 20%.

Characteristic	Symbol	SF301	SF302	SF303	SF304	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	V
Maximum RMS Voltage	V_{RSM}	35	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	V
Maximum Average Forward Rectified Current (Total Device) @ $T_C = 120^\circ\text{C}$	$I_{(AV)}$	30				A
Peak forward Surge Current 8.3ms half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300				A
Maximum Instantaneous Forward Voltage per leg at $I_F = 15\text{A}$ (Note 3) @ $T_J = 25^\circ\text{C}$ @ $T_J = 150^\circ\text{C}$	V_F	0.975 0.880				V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage per leg (Note 3) @ $T_J = 25^\circ\text{C}$ @ $T_J = 150^\circ\text{C}$	I_R	10 500				μA
Typical Junction Capacitance (Note 1)	C_J	80				pF
Maximum Reverse Recovery Time (Note 2)	T_{rr}	35				ns
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.0				$^\circ\text{C/W}$
Storage and Operating Temperature Range	T_J, T_{STG}	-65 to +175				$^\circ\text{C}$

- Notes:**
- (1) Measured at 1MHz and applied reverse voltage of 4.0 volts.
 - (2) Reverse recovery test conditions: $I_F = +0.5\text{A}$, $I_R = 1.0\text{A}$, $di/dt = 50\text{A}/\mu\text{s}$.
 - (3) Pulse width = 300 μs , 2% duty cycle.

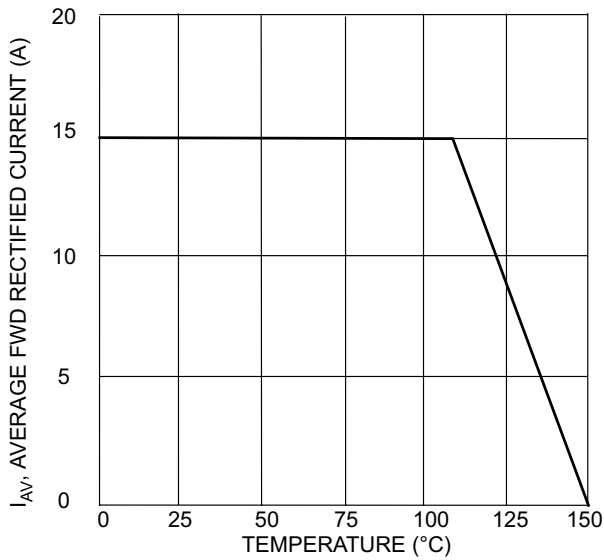


Fig. 1, T_C , Forward Current Derating Curve

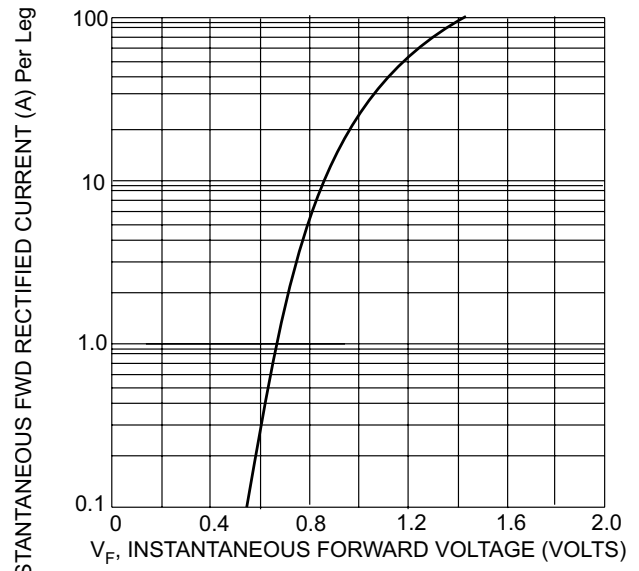


Fig. 2 Typical Forward Characteristics

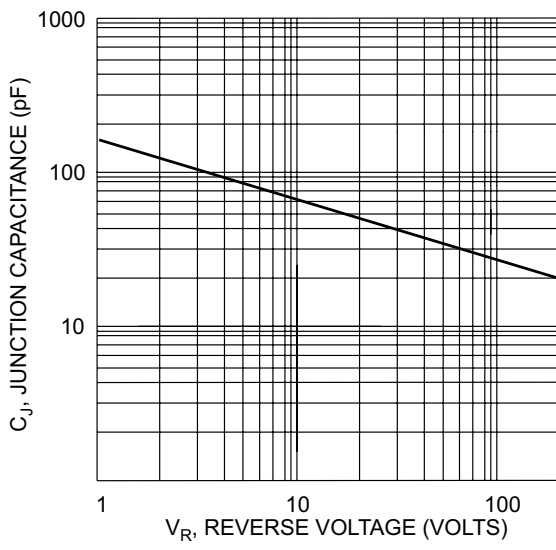


Fig. 3 Typical Junction Capacitance

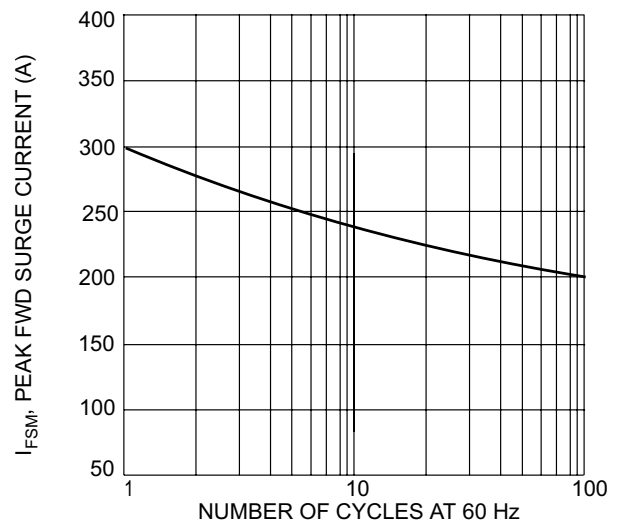


Fig. 4 Peak Forward Surge Current

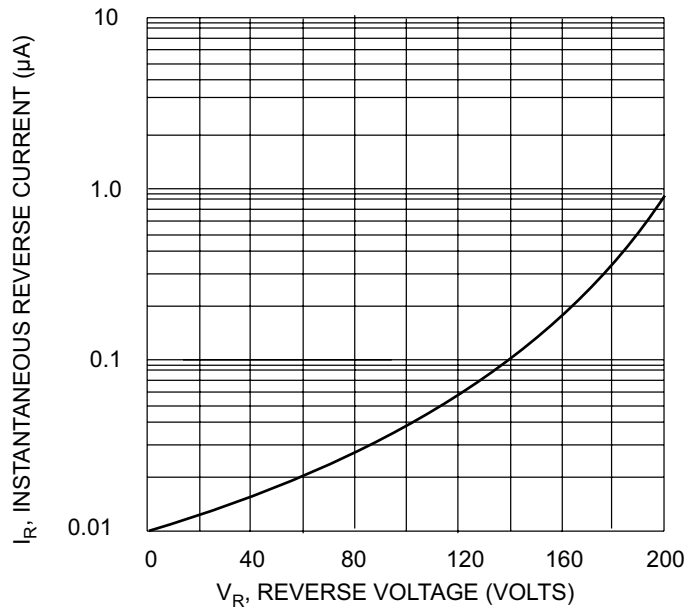
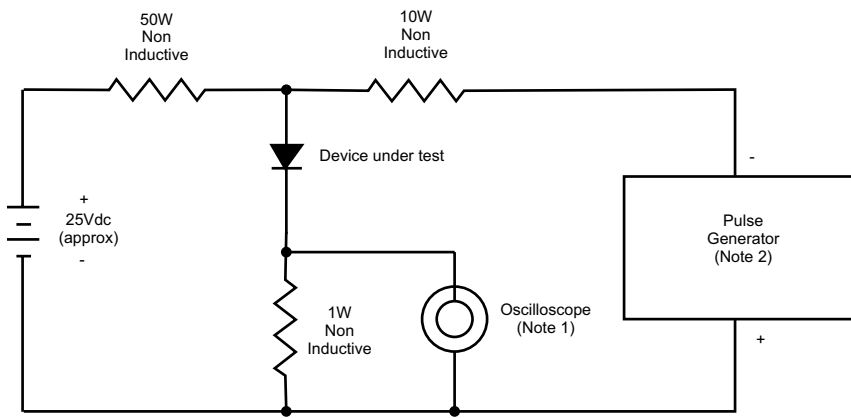


Fig. 5, Typical Reverse Characteristics



Notes: 1. Rise Time = 7ns max,
 nce = 1MW 22pF
 2. Rise Time = 10ns max
 Source Impedance = 50W

